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(71) Applicant  
Mono Containers Limited

(56) Documents cited  
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GB 1379371 US 4548349 US 4268567

(Incorporated in United Kingdom)

41/42 Kew Bridge Road, Brentford, Middlesex,  
TW8 0DY

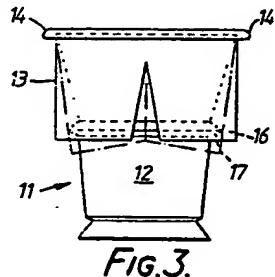
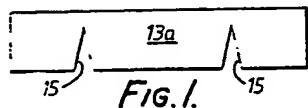
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(72) Inventors  
Ronald Kelly  
Raymond Gerald Phillips

(74) Agent and/or Address for Service  
Kilburn & Strode  
30 John Street, London, WC1N 2DD

(54) Insulated cup

(57) An insulated cup (11) comprises a plastics container (12) and a sleeve (13). The sleeve (13) is formed from a flat strip of card (13a) which is wrapped around the container (12) and glued in position around the rim (14). The strip has notches (15) to allow the sleeve to adopt a position in which it can be stacked. The space (16) between the sleeve (13) and the container (12) acts as an insulation.



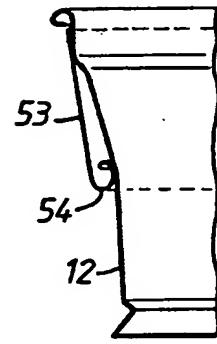
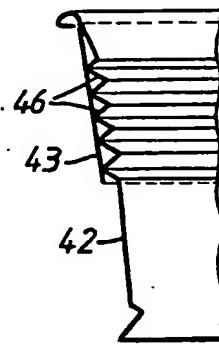
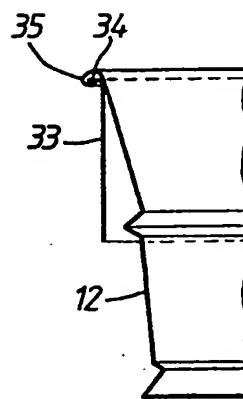
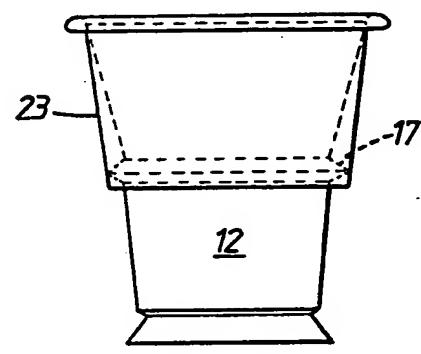
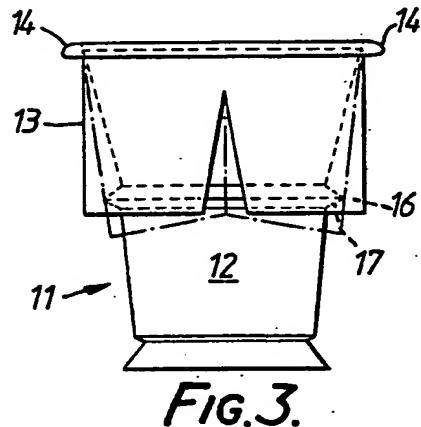
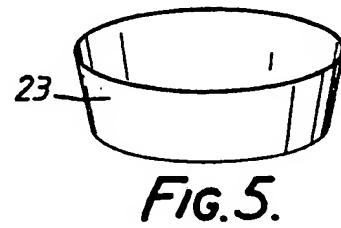
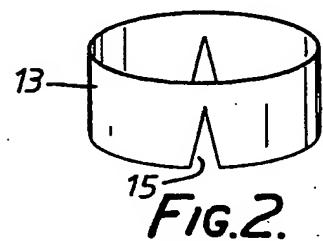
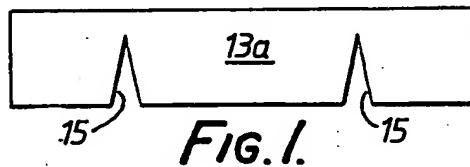
The drawing(s) originally filed was (were) informal and the print here reproduced is taken from a later filed formal copy.  
The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

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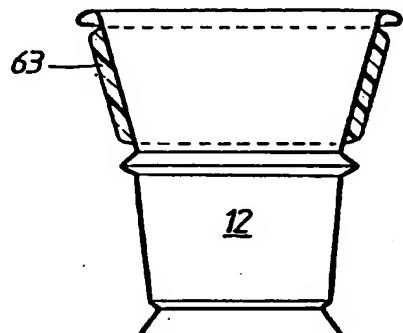


FIG. I.O.

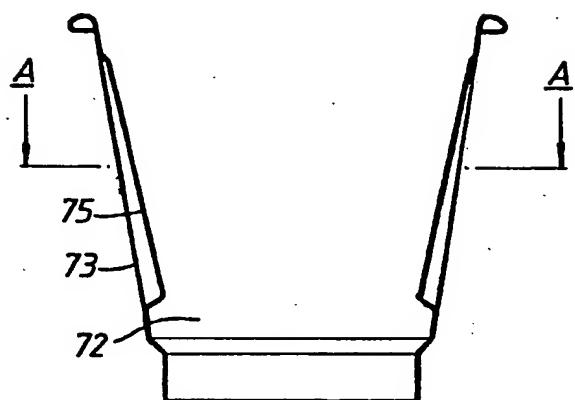


FIG. II.

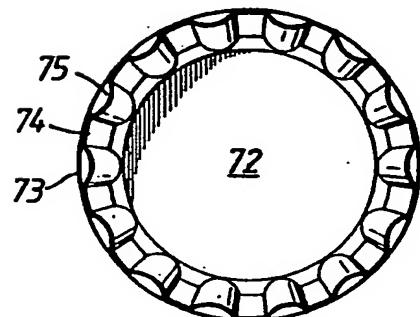


FIG. I.2.

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INSULATED CUPS

The present invention relates to insulated cups, which in the context of this specification include empty cups for receiving beverages and also containers 5 which hold ingredients to which a liquid, generally water, is to be added. These cups would normally be considered to be disposable.

Disposable cups are generally made from a plastics material or from paper which may have been rendered 10 water-proof. However, if they are to be used with hot beverages, they can be too hot to hold comfortably. Solutions to this drawback include making the cups from an insulating material, such as a foamed plastics material, or making the cups double-walled with an 15 insulating space between the inner and outer walls. However, these cups are more expensive to produce.

It is an object of the present invention to provide an insulated cup which is simpler and less expensive to produce than known insulated cups.

According to the invention, there is provided an 20 insulated cup comprising a plastics container and a separate sleeve formed from a flat strip which is attached to the container to define a portion of the cup as a whole which is insulated. Since the sleeve 25 begins as a flat strip, it can be printed upon cheaply and easily prior to its being attached to the container. This is a significant advantage over conventional cup designs which are difficult and expensive to print on.

The sleeve may be in the form of a collar attached 30 to the upper region of the container and may be made of paper, paperboard, cardboard, plastics or a foamed

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plastics material. In such a case the sleeve is formed by wrapping the flat strip around the container, in which case the two ends would meet at a seam which can be welded or glued. The strip can be arcuate, or 5 generally straight in which case it may have slits or notches to allow the wrapped strip to adopt an inclined orientation for stacking.

Preferably, the sleeve is spaced from the container to provide an insulation gap. This may be 10 achieved by a rib or ribs extending out from the container, or by an internal rib on the sleeve. The sleeve may be glued or welded to the container. Alternatively, the sleeve may have an outwardly 15 extending flange and the cup may have a lip which is curled over, in which case the flange of the sleeve can be located within the lip.

In an alternative embodiment, the sleeve may be a foamed plastics material which is not spaced from the container but is firmly attached to it.

20 In another embodiment, the container is formed with a series of ribs and channels, and the sleeve is attached to the container where contact is made with the ribs. The ribs may be generally horizontal or vertical and may widen throughout their length. The 25 sleeve may be a thin film and may be stretched or shrunk onto the container. The sleeve may cover substantially the entire outer surface of the container. In all these cases, the sleeve preferably covers the channels to define insulating air gaps.

30 The sleeve may be plain or may include printed material.

The invention may be carried into practice in various ways and some embodiments will now be described

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by way of example with reference to the accompanying drawings, in which :-

Figure 1 shows a strip for use as a sleeve in accordance with the present invention;

5 Figure 2 shows the strip of Figure 1 when wrapped;

Figure 3 shows the strip of Figure 2 in position on a container;

Figures 4, 5 and 6 are views similar to Figures 1, 2 and 3 showing an alternative embodiment;

10 Figures 7, 8 and 9 are partial vertical sections of further embodiments;

Figure 10 is a vertical section of a further embodiment;

15 Figure 11 is a vertical section of a further embodiment; and

Figure 12 is a section on the line AA in Figure 11.

20 Referring firstly to Figures 1 to 3, a cup 11 comprises a plastics container 12 and a sleeve 13. The sleeve 13 is formed from a flat strip of card 13a which is wrapped around the container 12 and glued in position around the rim 14. The strip 13a has a series (in this case, two) notches 15 which allow the sleeve 13 to adopt the position shown in the broken lines in Figure 3 for stacking.

25 A space 16 is formed between the sleeve 13 and the container 12 which acts as an insulation. The container has a rib 17 which helps to maintain the space 16 even when the sleeve 13 is gripped.

30 Figures 4, 5 and 6 show another embodiment in which the strip 23a is arcuate and has no notches. The sleeve 23 formed is therefore part-conical and is located in the same way as the sleeve 13. However, the

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sleeve 23 also contacts the rib 17 and can be glued to it if desired. Again, a space 16 is formed between the sleeve 23 and the container 12.

5 Figure 7 shows a third embodiment in which the sleeve 33 has a flange 34 (or flared portion) at the top which is located within the curled-over rim 35 at the top of the container 12.

10 Figure 8 shows a fourth embodiment in which the container 42 has a series of horizontal ribs 46. The sleeve 43 has a multi-point contact which enables the sleeve 43 to be made from a thinner material.

15 Figure 9 shows a fifth embodiment in which the sleeve 53 has a curled-under portion 54 at the bottom. This serves to space the sleeve 53 from the container 12.

15 Figure 10 shows a sixth embodiment in which a sleeve 63 of a foamed plastics material is attached to the upper part of the container 12.

20 Figures 11 and 12 show a seventh embodiment in which the container 72 has a series of vertical ribs 74 and channels 75. The sleeve 73 comprises a plastics film 73 which stretches over the entire surface of the container 72. Thus, the channels 75 trap air and act as insulators.

25 In this case, the film may be printed upon while flat, then formed into a tube. The tube is then placed over the container 72 and shrink-fitted in position.

**BEST AVAILABLE COPY****CLAIMS:**

1. An insulated cup comprising a plastics container and a separate sleeve formed from a flat strip which is attached to the container to define a portion of the cup as a whole which is insulated.  
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2. A cup as claimed in Claim 1 in which the sleeve is in the form of a collar attached to the upper region of the container.  
10
3. A cup as claimed in Claim 2 in which the collar is made from paper, paper board, cardboard, plastics or a foam plastics material.  
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4. A cup as claimed in Claim 2 or Claim 3 in which the sleeve is formed by wrapping the flat strip around the container so that the two ends meet at a seam and are welded or glued.  
20
5. A cup as claimed in any preceding claim in which the strip is arcuate.  
25
6. A cup as claimed in any of Claims 1 to 4 in which the strip is generally straight and has slits or notches.  
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7. A cup as claimed in any preceding claim in which the sleeve is spaced from the container to provide an insulation gap.
8. A cup as claimed in Claim 7 in which the insulation gap is achieved by a rib or ribs extending

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out from the container or by an internal rib on the sleeve.

9. A cup as claimed in any preceding claim in  
5 which the sleeve is attached to the container by means  
of gluing or welding.

10. A cup as claimed in any of Claims 1 to 8 in  
which the sleeve has an outwardly extending flange and  
10 the container which has a lip which is curled over, the  
flange of the sleeve being located within the lip.

11. A cup as claimed in Claim 1 or Claim 2 in  
which the sleeve is of a foam plastics material which  
15 is not spaced from the container and which is firmly  
attached to it.

12. A cup as claimed in any of Claims 1 to 9 in  
which the container is formed with a series of ribs and  
20 channels and the sleeve is attached to the container  
where contact is made with the ribs.

13. A cup as claimed in Claim 12 in which the  
ribs are generally horizontal or generally vertical.  
25

14. A cup as claimed in Claim 12 or Claim 13 in  
which the sleeve is a thin film which is stretched or  
shrunk onto the container.

30 15. A cup as claimed in any of Claims 12 to 14 in  
which the sleeve covers substantially the entire outer  
surface of the container.

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16. A cup as claimed in any of Claims 12 to 15 in which the sleeve covers the channels to define the insulating air gaps.

5 17. A cup as claimed in any preceding claim in which the sleeve includes printed material.

10 18. An insulated cup constructed and arranged substantially as herein specifically described with reference to and as shown in Figures 1 to 3, Figures 4 to 6, Figure 7, Figure 8, Figure 9, Figure 10 or Figures 11 and 12 of the accompanying drawings.

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